## REMARKS

Reconsideration of this application, based on this amendment and these following remarks, is respectfully requested.

Claims 1 through 20 remain in this case. Claims 1, 7, 8, and 15 through 17 are amended.

Claims 1 through 6 and 11 were rejected under §102(e) as anticipated by the DeLuca reference[1], which the Examiner asserted teaches all of the elements of those claims.[2]

Claims 9, 10, and 12 were rejected under §103 as unpatentable over the DeLuca reference in view of the Maurer et al. reference[3]. The Examiner asserted that the DeLuca reference taught all of the elements of the claims, except for a specified criterion of whether an eye or mouth or particular audible sound is present in the information from the scene, and analyzing the information to determine whether the information meets the criterion; the Examiner further asserted that the Maurer et al. reference provides such teachings, and that one skilled in the art would have obviously combined these teachings so as to implement a digital camera with convenient and efficient facial sensing (claims 9 and 10) and facial sensing with speech analysis (claim 12).[4]

Claims 13 and 14 were rejected under §103 as unpatentable over the DeLuca and Maurer et al. references, further in view of the Sakamoto et al. reference[5]. The Examiner asserted that the DeLuca and Maurer et al. references lacked the step of determining whether a detected audible sound is representative of a predetermined word or of laughter, but that the Sakamoto et al. reference teaches such determining, and that these teachings would have obviously been combined with those of the primary references so as to precisely determine lip motion of a person's facial movement.[6]

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[1] U.S. Patent No. 6,407,777 B1, issued June 18, 2002 to DeLuca.
[2] Office Action of October 3, 2003, at pages 2 through 4.
[3] U.S. Patent No. 6,272,231 B1, issued August 7, 2001 to Maurer et al.
[4] Office Action, *supra*, pages 5 and 6.
[5] U.S. Patent No. 5,563,793, issued October 1, 1996 to Sakamoto et al.
[6] Office Action, *supra*, pages 6 and 7.

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Claim 1 is amended to clarify its patentability over the applied references. Amended claim 1 now recites a method for operating a camera including the step of detecting information from a scene responsive to an operator action, the step of evaluating the detected information relative to a human facial characteristic and a specified criteria, and the continuing of the detecting and evaluating steps. The claimed method further requires the step of recording an image of the scene responsive to the evaluating step determining that the information includes information that is representative of the human facial characteristic and the specified criteria. This recording step, and its execution responsive to the outcome of the determining step, are clearly supported in the specification[7] and in originally presented claim 1; no new matter is therefore presented.

As described in the specification,[8] this invention provides important benefits in digital photography. Specifically, the inventive method greatly improves the quality of images taken by a digital camera, and improves the efficiency with which the memory of the camera is utilized, by recording images after analysis of facial characteristics and other criteria. Unwanted and unusable images are simply not taken by the camera if the desired criteria are not met by the current image as detected.

Applicant respectfully submits that amended claim 1 and its dependent claims are novel and patentably distinct over the applied references. Specifically, none of the applied references disclose or suggest the recording of the image after determining that image characteristics, including a human facial characteristic and a specified criteria, are met.

As mentioned above, the Examiner asserted that the DeLuca reference met originally presented claim 1 and many of its dependent claims. As is more clearly presented in amended claim 1, the inventive method requires the recording of the image responsive to the evaluating step determining that the detected image information specified criteria and human facial characteristic are met. The DeLuca reference nowhere discloses such a responsive action. Rather, the DeLuca reference instead discloses the modifying of a previously recorded image,

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[7] Specification of S.N. 09/465,242, page 12, lines 15 through 20; page 15, line 22 through page 20, line 30.
[8] Specification, *supra*, at page 20, line 31 through page 21, line 15.

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specifically by modifying the color of the recorded "red-eye" pixels from red to black.[9] Therefore, according to the reference, the image is stored (i.e., the "picture" is "taken") in every case, with the modifying process of the DeLuca reference then applied to the stored image. Accordingly, the DeLuca reference fails to disclose any decision upon which the recording depends, much less a decision based on the evaluating of the image information relative to human facial characteristics and another specified criteria, as required by amended claim 1 and its dependent claims. For these reasons, Applicant respectfully submits that amended claim 1 and its dependent claims are novel over the DeLuca reference.

Applicant further respectfully submits that amended claim 1 and its dependent claims are patentably distinct over the properly combined teachings of all of the applied references. As mentioned above, the DeLuca reference fails to disclose the recording of an image responsive to the determination made in the evaluating step. The Maurer et al. and Sakamoto et al. references also fail to disclose such recording. More specifically, the Maurer et al. reference is directed to sensing facial movements of a person for generating and animating an avatar image,[10] while the Sakamoto et al. reference teaches the storing of label information based on the attribute of sensed gestures and speech.[11] Accordingly, the combination of the DeLuca, Maurer et al., and Sakamoto et al. references still falls short of the requirements of amended claim 1.

Applicant further submits that there is no suggestion from the prior art to modify these teachings in such a manner as to reach the claims. None of the references suggest determining the quality of the image prior to recording the picture. At best, the references teach modifying images that have already been recorded. Especially considering that the benefits of the invention directly result from the differences between the claim and the prior art, Applicant respectfully submits that there is no suggestion from the prior art to combine or modify the

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[9] DeLuca, *supra*, column 2, lines 29 through 50; column 3, lines 54 through 59 ("The red-eye filter 90 of FIG. 1 searches the *digitally stored image* for pixels having a substantially red color, then determines if the grouping has round or oval characteristics. . . If found, the color of the grouping is modified."; *emphasis added*); column 4, line 65 through column 5, line 39.
[10] Maurer et al., *supra*, Abstract.
[11] Sakamoto et al., *supra*, column 5, lines 10 through 42.

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teachings of the references in such a manner as to reach amended claim 1 and its dependent claims.

For these reasons, Applicant respectfully submits that amended claim 1 and its dependent claims are novel and patentably distinct over the prior art of record in this case.

Claims 7 and 8 were objected to as depending on a rejected claim, but were indicated as directed to allowable subject matter.[12] Claim 7 is amended to be presented in independent form, incorporating the limitations of the claims upon which it previously depended, as suggested by the Examiner. Claim 8 is amended for consistency with amended claim 7, upon which it depends. Applicant therefore respectfully submits that claims 7 and 8 are now in condition for allowance.

Claims 15, 16, and 20 were rejected under §102 as anticipated by the DeLuca reference, on similar grounds as claims 1 through 6 and 11 discussed above. Claims 17 through 19 were rejected under §103 as unpatentable over the DeLuca reference in view of the Maurer et al. reference, on similar grounds as claims 9, 10, and 12 discussed above.

Claim 15 is amended to clarify its patentability over the applied references. Amended claim 15 is now directed to a camera including structural elements of an image detector and a control circuit, where the control circuit coupled to the image detector and the operator actuatable element. The recited control circuit comprises a memory for storing digital images, and a processor that controls the detector to detect information from a scene responsive to the actuation of the operator actuatable element, evaluates the information relative to a human facial characteristic and a specified criteria, and records an image of the scene in the memory responsive to determining that the scene information is representative of a human facial characteristic and a specified criteria. Because the specification clearly supports this construction of amended claim 15,[13] no new matter is presented by this amendment.

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[12] Office Action, *supra*, page 7.
[13] Specification, *supra*, page 6, line 11 through page 8, line 24; page 12, lines 15 through 20; page 15, line 22 through page 20, line 30.

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Claims 16 and 17 are amended for consistency with amended claim 15, with claim 17 now structurally reciting a microphone for detecting audible sounds from the scene.[14]

The camera of amended claim 15 provides similar important advantages in photography as discussed above relative to amended claim 1. The claimed camera automatically takes images with greatly improved quality relative to the poses of human subjects, with improved memory efficiency because the recording of the image depends upon successful evaluation of facial characteristics and other criteria. Memory and internal camera bandwidth are not consumed by unwanted and unusable images.

Applicant respectfully submits that amended claim 15 and its dependent claims are novel and patentably distinct over the applied references, because none of these references disclose or suggest a processor for recording the image in memory responsive to the evaluating of scene information determining that image characteristics, including a human facial characteristic and a specified criteria, have been met.

As discussed above relative to amended claim 1, the DeLuca reference nowhere discloses the recording of an image responsive to the evaluating step determining that the detected image information specified criteria and human facial characteristic are met. The DeLuca reference instead teaches circuitry that modifies certain pixels in a previously recorded image, specifically by blackening recorded "red-eye" pixels.[15] The image in the DeLuca camera is stored (i.e., the "picture" is "taken") in every case, regardless of whether red-eye artifacts are present. Accordingly, the DeLuca reference fails to disclose any responsive relationship between the evaluating of scene information and the recording of an image of the scene, as performed by the control circuit of the camera of amended claim 15. Applicant therefore respectfully submits that amended claim 15 and its dependent claims are novel over the DeLuca reference.

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[14] *See* specification, *supra*, page 7, lines 1 through 5.
[15] DeLuca, *supra*, column 2, lines 29 through 50; column 3, lines 54 through 59 ("The red-eye filter 90 of FIG. 1 searches the *digitally stored image* for pixels having a substantially red color, then determines if the grouping has round or oval characteristics. . . If found, the color of the grouping is modified."; *emphasis added*); column 4, line 65 through column 5, line 39.

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Applicant further respectfully submits that the properly combined teachings of all of the applied references fall short of the requirements of amended claim 15. The Maurer et al. and Sakamoto et al. references also fail to disclose the function of the processor in recording of an image responsive to the determination made by its evaluating function, which was also missing from the DeLuca reference. The Maurer et al. reference is instead directed to sensing facial movements of a person for generating and animating an avatar image,[16] and the Sakamoto et al. reference instead teaches the storing of label information based on the attribute of sensed gestures and speech.[17] Accordingly, the combination of the DeLuca, Maurer et al., and Sakamoto et al. references still falls short of the requirements of amended claim 15.

Further, Applicant submits that there is no suggestion from the prior art to modify these teachings in such a manner as to reach the claims. None of the references in any way suggest recording the picture responsive to a determination of the quality of the poses of the subjects in the scene, as results from the operation of the camera of amended claim 15. Instead, the prior art, at best, resorts to modifying the images that have already been recorded. The patentability of amended claim 15 and its dependent claims is supported because the benefits of the invention directly result from the differences between the claim and the prior art. Applicant therefore submits that there is no suggestion from the prior art to combine or modify the teachings of the references in such a manner as to reach amended claim 15 and its dependent claims.

For these reasons, Applicant respectfully submits that amended claim 15 and its dependent claims are also novel and patentably distinct over the prior art of record in this case.

The references cited by the Examiner as pertinent but not applied have been considered, but are not felt to come within the scope of the claims in this case.

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[16] Maurer et al., *supra*, Abstract.
[17] Sakamoto et al., *supra*, column 5, lines 10 through 42.

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For the above reasons, Applicant respectfully submits that all claims now in this case are in condition for allowance. Reconsideration of the above-referenced application is therefore respectfully requested.

Respectfully submitted,

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